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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,115	03/08/2005	Hans Lobl	DE 020206	9528
65913	7590	02/05/2010	EXAMINER	
NXP, B.V. NXP INTELLECTUAL PROPERTY & LICENSING M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			NADAV, ORI	
			ART UNIT	PAPER NUMBER
			2811	
			NOTIFICATION DATE	DELIVERY MODE
			02/05/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant argues that the finality of the present Office Action should be withdrawn since the finality is premature, because “new reasoning has been presented by the Examiner in the current Office Action (11/25/2009)”, and “the finality of the present Office Action is not necessitated by actions of Applicants because no substantial amendments were made to the claims to warrant the new reasoning, and the arguments presented by Applicants appear to have been persuasive as the Examiner issued new and different articulated reasoning as the basis for the rejection of claims 7-8, 11, 12, 14, and 16 under 35 U.S.C. 103(a)”.

The last office action, mailed on 11/25/2009, states that “Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a)”. Therefore, a new ground of rejection could have been used, and the office action would have been final. However, the pending claims were rejected by using the same combination of references which were used in the non-final office action, mailed on 04/24/2009. For the above reasons, the finality of the last Office Action is not premature.

2. Applicant argues that there is support in the embodiment of figure 1 for the limitation of “the absorbing layer” as recited in claims 11, 12, 14, and 25, because 35

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U.S.C. 112, first paragraph, does not provide any basis for the present rejection because 35 U.S.C. 112, first paragraph, does not require that the subject matter of claims 11, 12, 14, and 25 have support in the elected embodiment. Moreover, the subject matter of each of claims 11, 12, 14, and 25 qualifies as a sub-species of the embodiment shown in Fig. 1. Although the subject matter illustrated in Fig. 1 does not explicitly include an absorbing layer, there is no requirement that sub-species of the elected species cannot include additional features.

The examiner fails to understand what applicant means by stating that “the subject matter of each of claims 11, 12, 14, and 25 qualifies as a sub-species of the embodiment shown in Fig. 1”. The examiner respectfully requests applicant to state whether the limitations recited in claims 11, 12, 14 and 25 are different species or do they belong to the device of figure 1. The examiner further requests applicant to explain how the claimed limitations recited in claims 11, 12, 14 and 25 should be included in the device of figure 1. Please note that all the claimed subject matter must be depicted in the drawings. Therefore, applicant is required to include said limitations in the drawings.

3. Applicant argues that there is inconsistency regarding the rejections of claim 7, because “claim 7 was rejected under 35 U.S.C. 102(e) as being anticipated by Nishihara but the Office Action also rejects claim 7 under 35 U.S.C. 103(a) as unpatentable over Nishihara, “with the recognition that Nishihara does not disclose all of

the limitations of the claim. Applicant further argues that it appears that these rejections of claim 7 under 35 U.S.C. 102(e) and 103(a) contradict each other. Therefore, it stands that one of the above rejections is improper.

Claim 7 was rejected under 35 U.S.C. 102(e) as being anticipated by Nishihara, because Nishihara et al. teach an uneven surface of the substrate. By broadly interpreting claim 7, the recitation of “the uneven surface is on a rear side of the substrate facing away from the bottom electrode” does not have to mean that the uneven surface of the substrate is the side of the substrate which is not attached to any other layer. Therefore, claim 7 is anticipated by Nishihara et al.

On the other hand, if the broad interpretation of the claim as suggested by the examiner is not acceptable, and it does not mean that the uneven surface of the substrate can be the side of the substrate which is attached to other layers, then claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishihara et al.

In other words, although Nishihara et al. teach an uneven surface of the substrate, Nishihara et al. do not teach that the uneven surface of the substrate is located on the side of the substrate which is not attached to any other layer. Therefore, the rejections of claim 7 under 35 U.S.C. 102(e) and 103(a) do not contradict each other, and none of the above rejections is improper.

4. Applicant argues that Nishihara et al. do not teach that the uneven surface is on a rear side of the substrate facing away from the bottom electrode.

The examiner could not find any definition for the phrase “facing away” which is different from the term “opposite”. Therefore, the recitation of “the uneven surface is on a rear side of the substrate facing away from [or opposite] the bottom electrode” **does not have to** mean that the uneven surface of the substrate is the side of the substrate which is not attached to any other layer. Looking at and considering the substrate from the side which is not attached to any other layer renders said side as the “front side”, and the other side of the substrate as the “rear side of the substrate”. That is, the rear side of the substrate can be arbitrarily chosen as the side which is not the “front side”.

The examiner, however, agrees that the claims will not be anticipated by Nishihara et al. if the claims recite that the uneven surface of the substrate is the surface which is not directly connected to the Bragg layer of the claimed structure or is not directly connected to any layer of the claimed structure.

5. Applicant argues that “in order to implement the modification suggested by the Examiner, the description of Nishihara would have to be augmented to include an additional process step to make the surface uneven on a rear side of the substrate. Adding an additional process step to the description of Nishihara in order to implemented the modification, as suggested by the Examiner, would not “simplify the processing steps of making the device,” but rather would make the processing steps more complex by addition additional processing steps”.

An artisan would be motivated to use a substrate with an uneven surface, wherein the uneven surface is on a rear side of the substrate facing away from the bottom electrode in Nishihara et al.'s device in order to improve the device characteristics by improving the adhesion between the substrate and the device structure by having the uneven surface on a rear side of the substrate and by adhering the smooth surface of the substrate to the semiconductor layer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ori Nadav whose telephone number is 571-272-1660. The examiner can normally be reached between the hours of 7 AM to 4 PM (Eastern Standard Time) Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Gurley can be reached on 571-272-1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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